

**AMENDMENTS TO THE CLAIMS**

Claims 1-24 (canceled)

25. (previously presented) An isolated polypeptide comprising the amino acid sequence set forth in SEQ ID NO: 2.

26. (previously presented) A composition comprising the isolated polypeptide of claim 25 and an acceptable carrier.

27. (previously presented) The isolated polypeptide of claim 25, wherein the isolated polypeptide comprises a heterologous amino acid sequence fused to the amino acid sequence set forth in SEQ ID NO: 2.

28. (previously presented) A composition comprising the isolated polypeptide of claim 27 and an acceptable carrier.

29. (previously presented) The isolated polypeptide of claim 25, wherein the isolated polypeptide consists of the amino acid sequence set forth in SEQ ID NO: 2.

30. (previously presented) A composition comprising the isolated polypeptide of claim 29 and an acceptable carrier.

31. (currently amended) An isolated polypeptide fragment comprising at least 50 consecutive amino acids of SEQ ID NO: 2 wherein said polypeptide fragment ~~comprises the amino acid at position 191 of SEQ ID NO: 2, wherein said amino acid is glycine or a conservative substitution thereof, and wherein the polypeptide fragment comprises at least one biological activity of Fab-I~~ is capable of reducing crotonyl-CoA or crotonyl-ACP.

32. (previously presented) The isolated polypeptide fragment of claim 31, wherein the isolated polypeptide fragment comprises a heterologous amino acid sequence fused to the at least 50 consecutive amino acids of SEQ ID NO: 2.

33. (currently amended) An isolated polypeptide fragment comprising at least 30 consecutive amino acids of SEQ ID NO: 2 wherein said polypeptide fragment ~~comprises the amino acid at position 191 of SEQ ID NO: 2, wherein said amino acid is glycine or a conservative substitution thereof, and wherein the polypeptide fragment comprises at least one biological activity of Fab-I~~ is capable of reducing crotonyl-CoA or crotonyl-ACP.

34. (previously presented) The isolated polypeptide fragment of claim 35, wherein the isolated polypeptide fragment comprises a heterologous amino acid sequence fused to the at least 30 consecutive amino acids of SEQ ID NO: 2.

35. (currently amended) An isolated polypeptide, wherein said polypeptide comprises an amino acid sequence encoded by a polynucleotide ~~that hybridizes under stringent conditions to the complementary strand of a polynucleotide~~ having at least 95% identity with the polynucleotide sequence set forth in SEQ ID NO: 1 ~~and wherein said polypeptide comprises the amino acid at position 191 of SEQ ID NO: 2, or its equivalent, and said amino acid is glycine or a conservative substitution thereof.~~

36. (currently amended) An isolated polypeptide comprising an amino acid sequence having at least 95% identity with the amino acid sequence set forth in SEQ ID NO: 2, ~~wherein said polypeptide comprises the amino acid at position 191 of SEQ ID NO: 2, or its equivalent, and said amino acid is glycine or a conservative substitution thereof.~~

37. (currently amended) An isolated polypeptide, comprising an amino acid sequence comprising SEQ ID NO: 2 with 0 to 10 conservative amino acid substitutions, ~~wherein said polypeptide comprises the amino acid at position 191 of SEQ ID NO: 2, or its equivalent, and said amino acid is glycine or a conservative substitution thereof.~~